

ABSTRACT

A solid oxide fuel cell includes a plurality of electric power-generating elements stacked in a stack direction, each including a solid oxide electrolyte and a porous electrode section. A plurality of first current collector layers are connected to the porous electrode sections, respectively. At least one separator is provided for separating the plurality of electric power-generating elements. A gas supply channel is defined between the at least one separator and is associated with one of the plurality of first current collector layers. A plurality of gas supply branch passages branch off from the gas supply channel and reach the electrode section of the associated one of the plurality of electric power-generating elements. The fuel cell further includes a plurality of gas exhaust channels for exhausting consumed gas via the associated one of the plurality of first current collector layers.